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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Chen-Ho Lee

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EXAMINER

QUIETT, CARRAMAH J

ART UNIT

PAPER NUMBER

2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 09/916,271	Applicant(s) LEE, CHEN-HO	
	Examiner Carramah J. Quiett	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Amendment***

1. The amendment(s), filed on 11/09/2006, have been entered and made of record. Claims 1-18 are pending.

***Response to Arguments***

2. Applicant's arguments filed 11/09/2006 have been fully considered but they are not persuasive.

For claims 1, 2, and 12-17, the applicant traverses the examiner rejection under 35 U.S.C. 102(b) as being anticipated by Stoffel et al. (U.S. Pat. #4,432,017). Particularly for claim 1, <sup>Applicant</sup> ~~Applicant~~ submits that Stoffel does not teach a multiple staggered sensor. Examiner respectfully disagrees. While Stoffel additionally states that two linear photosensor arrays that are generally located in close proximity to each other (col. 3, lines 54-58), he initially teaches that two rows of photosites 30, 32 are provided, one offset from the other on a single CCD integrated circuit chip (col. 2, lines 44-46). As shown in fig. 2a, Stoffel illustrates staggered photosites.

Then, for claim 12, the applicant submits that Stoffel does not teach a multiple staggered sensor. Examiner respectfully disagrees. While Stoffel additionally states that two linear photosensor arrays that are generally located in close proximity to each other (col. 3, lines 54-58), he initially teaches that two rows of photosites 30, 32 are provided, one offset from the other on a single CCD integrated circuit chip (col. 2, lines 44-46). As shown in fig. 2a, Stoffel illustrates staggered photosites.

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Regarding claim 15, the applicant submits that Stoffel does not teach a multiple staggered sensor. Examiner respectfully disagrees. Claim 15 is not patentable over Stoffel at least for the same reasons as claims 1 and 12. Please the examiners response for claims 1 and 12 above.

Accordingly, the examiner maintains her rejection of claims 1, 2, and 12-17, under 35

U.S.C. 102(b) as being anticipated by Stoffel et al. (U.S. Pat. #4,432,017). The examiner has also decided to reject claims 6-8 and 18 under 35 U.S.C. 102(b) as being anticipated by Stoffel (U.S. Pat. #4,432,017) as discussed in the following rejection.

3. Applicant's arguments with respect to claims 1, 3-4, 6-11, and 18 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Objections***

4. Claim 14 objected to because of the following informalities: Claim 14 recites the inter alia, "...the method wherein said photocells comprise metal at least one of an oxide semiconductors, and a charge-coupled device." Examiner is assuming that the applicant meant to write claim 14 as, "...the method wherein said photocells comprise at least one of a metal oxide semiconductor, and a charge-coupled device. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. **Claims 1-2, 6-8, and 12-20** are rejected under 35 U.S.C. 102(b) as being anticipated by Stoffel et al. (U.S. Pat. #4,432,017).

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As for **claim 1**, Stoffel teaches a method of reading pixel signals from a multiple staggered sensor (col. 2, line 43 – col. 3, line 49), comprising:

receiving pixel signals from a multiple staggered sensor which comprises at least two linear image sensors (col. 2, lines 43-46), wherein one or more photocells of one said linear image sensor are offset abutting with one or more photocells of said adjacent linear image sensor (col. 2, lines 46-57); and

creating an image utilizing said pixel signals from said one or more photocells of one said linear image sensor, without utilizing said pixel signals from said other linear image sensor (col. 2, line 58 – col. 3, line 14).

For **claim 2**, Stoffel teaches the method wherein said photocells comprise one or\* more charge-coupled devices (col. 2, lines 43-46).

As for **claim 6**, Stoffel teaches a method of video output applicable on a multiple staggered sensor, in fig. 2a, comprising:

providing at least two sensor rows in said multiple staggered sensor, each said sensor row comprising one or more photocells (col. 2, lines 43-57);

reading a scan line with one or more pixels by one of said sensor rows to generate a first consecutive video signals (col. 2, lines 43-57);

offsetting reading said scan line with said pixels by the other of said sensor rows to generate a second consecutive video signals (col. 2, line 58 – col. 3, line 14); and

outputting said video output consisting of at least said first consecutive video signals (col. 2, line 58 – col. 3, line 14).

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As for **claim 7**, Stoffel further teaches the method wherein said photocells of one said sensor row are offset abutting with said photocells of the other adjacent sensor row respectively (col. 2, lines 43-46).

For **claim 8**, Stoffel teaches the method wherein said photocells comprise one or\* more charge-coupled devices (col. 2, lines 43-46).

As for **claim 12**, Stoffel teaches a method, comprising:

receiving signals from a multiple staggered sensor portion, said staggered sensor portion comprising at least two image sensors wherein one or more photocells of a first image sensor are offset and adjacent one or more photocells of a second image sensor (col. 2, lines 43-57); and

outputting a image comprising signals from one of said first image sensor or\* said second image sensor (col. 2, line 58 – col. 3, line 14).

For **claim 13**, Stoffel teaches the method further comprising outputting an image comprising signals from the other of said first image sensor or said second image sensor (col. 2, line 58 – col. 3, line 14).

For **claim 14**, Stoffel teaches the method wherein said photocells comprise metal at least one of\* an oxide semiconductors, and a *charge-coupled device* (col. 2, lines 43-46).

As for **claim 15**, Stoffel discloses a system (fig. 2a), comprising:

an image sensing portion (28) comprising a multiple staggered sensor comprising at least two image sensors wherein one or more photocells (32a, 32b) of a first image sensor (32) are offset (col. 2, lines 43-57; col. 3, lines 2-7) and adjacent one or more photocells (30a, 30b) of a second image sensor (30) (col. 2, lines 43-57; col. 3, lines 18-26); and

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a scanning circuit (42/44) capable of\*\* receiving signals from said first and second image sensors, and capable of\*\* outputting an image based at least in part upon the received signals from one of said first image sensor, or said second image sensor (col. 3, lines 37-43).

For **claim 16**, Stoffel discloses the system according wherein said scanning circuit is further capable of\*\* outputting an image based at least in part upon the other of said at least two image sensors (col. 3, lines 37-43).

For **claim 17**, the claim is very similar to the limitation in claim 14. Therefore, claim 14 is analyzed and rejected as discussed in claim 14.

As for **claim 18**, Stoffel discloses a system (fig. 2a) comprising:

a means (38) for receiving signals from a multiple staggered sensing means (28), the multiple staggered sensing means comprising a plurality of linear image sensors (30 and 32), wherein a plurality of photocells of one linear image sensor are offset abutting (see fig. 2a) with a plurality of photocells of a linear image sensor that is adjacent to the linear image sensor (col. 2, lines 43-57); and

a means (28/36) for outputting an image comprising signals from one linear image sensor of the multiple staggered sensing means without utilizing another linear image sensor of the multiple staggered sensing means (col. 2, line 58 – col. 3, line 14).

**Claims 19 and 20** are apparatus (system) claims corresponding to the apparatus (system) claims 16 and 17, respectively. Therefore, method claims 19 and 20 are analyzed and rejected as previously discussed with respect to claims 16-17, respectively.

7. **Claims 1, 3, 4, 6, and 9-10** are rejected under 35 U.S.C. 102(e) as being anticipated by Watanabe (U.S. Pat. #6,522,356).

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As for **claim 1**, Watanabe teaches a method of reading pixel signals from a staggered sensor, comprising:

receiving pixel signals from a multiple staggered sensor which comprises at least two linear image sensors, wherein one or more photocells of one said linear image sensor are offset abutting with one or more photocells of said adjacent linear image sensor (fig. 9; col.8, line 45 - col. 9, line 21); and

creating an image utilizing said pixel signals from said one or more photocells of one said linear image sensor, without utilizing said pixel signals from said other linear image sensor (fig. 11, col. 10, lines 10-63).

Regarding **claim 3**, Watanabe teaches the method wherein said photocells comprise a plurality of sensors of complementary metal oxide semiconductor. In col. 8, lines 45-51, Watanabe states that an X-Y scan reading type imaging apparatus is illustrated in fig. 9 with a plurality of pixels. X-Y scan reading type imaging apparatus inherently has a plurality of complementary metal oxide semiconductor (CMOS) sensors.

For **claim 4**, Watanabe further teaches the method, wherein said reading out step is coordinated with at least a series of clock pulses (figs. 9-11; col. 9, line 22 - col. 10, line 63).

As for **claim 6**, Watanabe teaches a method of video output applicable on a multiple staggered sensor in a scanner, in figures 9-11, said method comprising:

providing at least two sensor rows in' said multiple staggered sensor, each said sensor row consisting of a plurality of photocells (fig. 9; col.8, line 45 - col. 9, line 21);

reading a scan line with a plurality of pixels by one of said sensor row to generate a first consecutive video signals (fig. 11, col. 10, lines 10-63);



offsetting reading said scan line with said pixels by the other of said sensor row to generate a second consecutive video signals (fig. 11, col. 10, lines 10-63); and

outputting said video output consisting of at least said first consecutive video signals(fig. 11, col. 10, lines 10-63).

Regarding **claim 9**, Watanabe further teaches the method wherein said photocells comprise a plurality of sensors of complementary metal oxide semiconductor. In col. 8, lines 45-51, Watanabe states that an X-Y scan reading type imaging apparatus is illustrated in fig. 9 with a plurality of pixels. X-Y scan reading type imaging apparatus inherently has a plurality of complementary metal oxide semiconductor (CMOS) sensors.

Lastly for **claim 10**, Watanabe teaches the method wherein said video output further comprises said second consecutive video signals (fig. 11, col. 10, lines 10-63).

### ***Claim Rejections - 35 USC § 103***

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. **Claims 5 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoffel et al. (U.S. Pat. #4,432,017).

For **claim 5**, Stoffel discloses a method of outputting said pixel signals from said consecutive photocells of one said linear image sensor (col. 3, lines 37-43). However, Stoffel does not expressly teach the method of outputting said pixel signals from said consecutive photocells of one said linear image sensor into an analog/digital converter. The Examiner takes Official Notice that it is well known in the art to output said pixel signals from said consecutive

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photocells of one said linear image sensor into an analog/digital converter. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Stoffel's method of outputting said pixel signals into an analog/digital converter in order to improve the quality of the scanned image. It is noted by the Examiner that because Applicant failed to timely traverse the old and well-known statement, it is now taken as Admitted Prior Art (see MPEP 2144.03(c)).

**Claim 11** is a method claim corresponding to method claim 5. Therefore, claim 11 is analyzed and rejected as previously discussed with respect to claim 5.

**\*Note:** The U.S. Patent and Trademark Office considers Applicant's "or" language and "at least one of" language to be anticipated by any reference containing one of the subsequent corresponding elements.

**\*\*Note:** The Applicant's "capable of" language as used in the claims broadens the scope of the claims. The MPEP states that, "Claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by language that does not limit a claim to a particular structure." (MPEP 2111.04 [R-3]) In other words at the U.S. Patent and Trademark Office, if a limitation is written with "capable of" language, a reference is deemed to meet that limitation if the reference discusses the same element that, although not actually performing the claimed function, is **structurally capable of** performing it. Accordingly, the Examiner *will not* give a limitation with "capable of" language patentable weight.

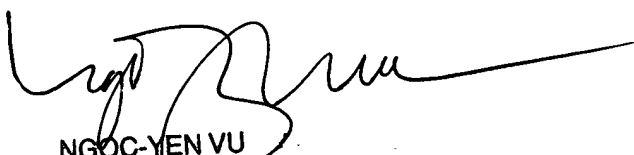
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carramah J. Quiett whose telephone number is (571) 272-7316. The examiner can normally be reached on 8:00-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CJQ  
January 25, 2007

  
NGOC-YEN VU  
SUPERVISORY PATENT EXAMINER